

5. On the *Lacerta depressa* of Camerano.

By G. A. BOULENGER, F.R.S., V.P.Z.S.

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(Plate XXII.\*)

Much work has been done lately on the various forms which cluster round the common *Lacerta muralis* of Europe, and the younger herpetologists have shown an ever increasing inclination towards multiplying species. Whether this narrower conception of species will result in a better understanding of the distribution and phylogeny of this difficult group, is a question I will not at present discuss. But I may say that these recent systematic attempts seem to justify the view expressed by Dr. Günther thirty years ago †, that "Such nominal species rarely survive their author; but before they are merged again in the synonymy, they are the cause of much unnecessary trouble, and being founded on slight individual peculiarities, they are frequently mistaken, rarely recognised."

The history of *Lacerta depressa* illustrates the case in point.

Some time ago I received from my friend Dr. F. Werner a lizard from the Bithynian Olympus, near Brussa (altitude 1500–1800 metres), which he referred to *L. depressa* of Camerano, and particularly to the var. *rudis* of Bedriaga. An account of this and other specimens of the same form is given by Werner in his valuable paper on the Reptiles of Asia Minor ‡. This lizard differs so considerably from the specimen of *L. depressa* (one of the types, received from the Turin Museum) preserved in the British Museum, that I could not satisfy myself of the correctness of Werner's identification, notwithstanding his express statement that this was arrived at after comparison of one of the types from Trebizond, entrusted to him by the Turin Museum.

In order to clear up my doubts, I applied to my friend Prof. Camerano for the loan of the specimens of *L. depressa* § preserved in the Museum under his charge; and my request having been kindly granted, I wish to lay before the Society the result of my examination.

This shows that, as could be gathered from Bedriaga's description ¶, the species is made up of several distinct forms (I would call them varieties). There is no evidence that the specimens all came from Trebizond, for De Filippi, their collector, himself says of the species referred to *L. taurica* ¶¶, "trovanno commune da Trebisonda a Tiflis." It is remarkable that the descriptions of both Camerano and Bedriaga, who had access to all the specimens,

\* For explanation of the Plate, see p. 339.

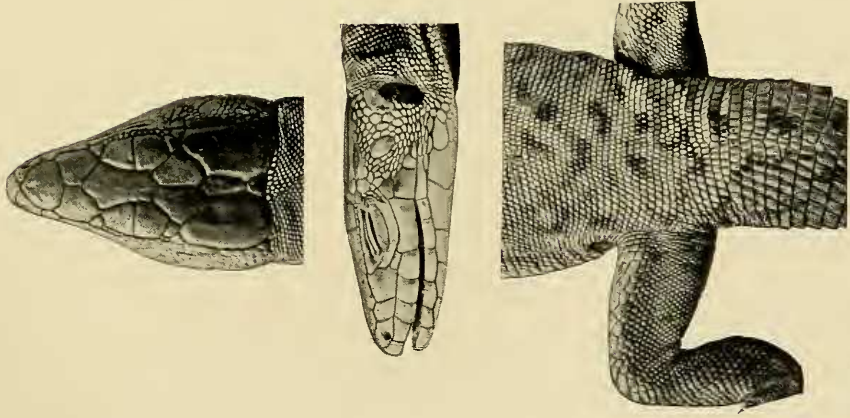
† Introduction to Catalogue of Fishes, viii. p. vi.

‡ Sitzb. Ak. Wien, cxi. 1902, p. 30, pl. iii.

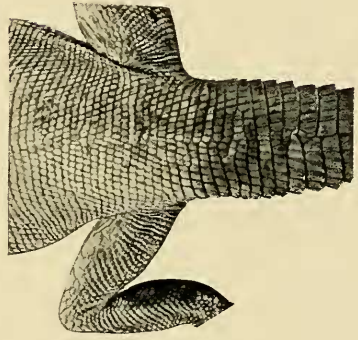
§ *Podarcis depressa*, Camerano, Atti Acc. Torin. xiii. 1878, p. 539.

¶ Abh. Senck. Ges. xiv. 1886, p. 272.

¶¶ Arch. per la Zool. ii. 1863, p. 386.

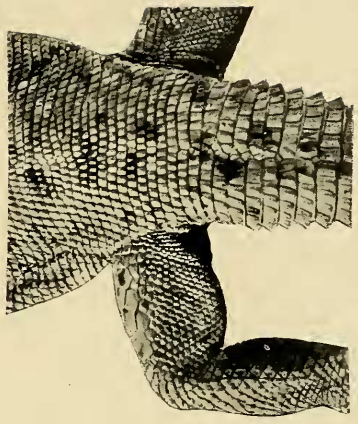
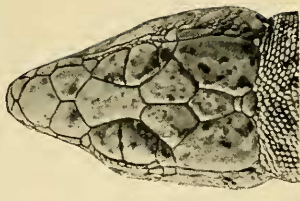


J. Green photo.



b

LACERTA DEPRESSA Camerano



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six in number\*, though very detailed, do not cover by any means the variations which the specimens show. I quite agree with Boettger † in regarding *L. depressa* and its varieties as not specifically separable from the *L. muralis* of S.W. Asia, which embraces the forms named *L. chalybdea*, *L. saxicola*, *L. portschinskii*, and *L. defilippii*. With these forms I propose to deal elsewhere, and my object on the present occasion is merely to give accurate descriptions of the individual specimens which are the types of *L. depressa*. One of them is in the British Museum, one has passed into the collection of Dr. de Bedriaga and is not available to me at present, whilst the four others are preserved in the Turin Museum. I deal with the five specimens in order of size.

1. *Male*.—Snout obtusely pointed; the greatest depth of the head equals the distance between the eye and the tympanum. Rostral not entering the nostril, forming a narrow suture with the frontonasal‡; frontal as long as its distance from the end of the snout; a complete series of granules between the two principal supraoculars and the supraciliaries; fourth supraocular divided into two; parietals once and a half as long as broad, not in contact with the upper supraocular §; the upper border of the parietal very slightly concave in front for the accommodation of a rather large upper temporal shield; occipital half as long, but a little broader than the interparietal; temporal scales small and granular; tympanic and masseteric shields well developed, the latter oval, oblique, and separated from the upper temporal by two series of granules; four upper labials anterior to the subocular, the lower border of which is nearly as long as the upper.

Collar even-edged, composed of 11 plates; 31 scales on a line between the symphysis of the chin-shields and the median plate of the collar.

Body much depressed. Dorsal scales roundish-hexagonal, flat, faintly keeled on posterior part of back; 60 scales across the middle of the body, 3 or 4 transverse series corresponding to a ventral plate, 44 to the length of the head. Ventral plates in 6 longitudinal and 26 transverse series. Anal plate preceded by a nearly equally large shield, the two plates bordered by a semi-circle of 9 small plates.

Hind limb reaching the collar. Scales on upper surface of tibia rhomboidal, keeled, and a little larger than the dorsals, 8 transverse series of the former corresponding to 10 of the latter. Femoral pores 22–21. 27 lamellar scales under the fourth toe.

Upper and lateral scales at the base of the tail strongly keeled, those on the sides raised behind, subtriangular, squarely truncate; the whorls alternately longer and shorter, but not very markedly

\* Bedriaga says seven, but this is probably through a *lapsus calami*.

† Ber. Senck. Ges. 1892, p. 141.

‡ As occurs sometimes in both the *f. typica* and the var. *bedriaga*.

§ Méhely, Ann. Mus. Hung. ii. 1904, p. 367, has strangely overrated the systematic importance of this character, which is inconstant not only in Asiatic examples but also in the European (numerous exceptions from France, Spain and Portugal, Italy, Islands of Mediterranean) and North African.

so; the fourth whorl behind the postanal small scales contains 29 scales.

Back spotted all over; sides darker, with whitish ocellar spots; upper surface of head unspotted; labials black-edged; uniform white beneath.

2. *Female*.—Head as in the preceding specimen, but smaller and less strongly depressed, its greatest depth equalling the distance between the centre of the eye and the tympanum. Rostral as in the preceding, but separated from the frontonasal, the nasals forming a short median suture; frontal, supraciliary granules, and parietals as in the preceding; fourth supraocular undivided; occipital very short, a little narrower than the interparietal, and separated from it by an additional shield; masseteric shield separated from the upper temporal shield by a single series of granules; five anterior upper labials; subocular as in the preceding.

Collar even-edged, composed of 9 plates; 25 scales between the chin-shields and the collar.

Body much depressed. Dorsal scales oval and distinctly keeled; 51 scales across the middle of the body, 3 corresponding to a ventral plate, 35 to the length of the head. Ventral plates in 6 longitudinal and 27 transverse series. Anal plate preceded by a large but narrower plate and bordered on each side by 3 small plates.

Hind limb reaching the axil. Scales on upper surface of tibia rhomboidal and strongly keeled, much larger than the dorsals, 6 of the former corresponding to 10 of the latter. Femoral pores 18–18. 25 scales under the fourth toe.

Upper caudal scales very strongly keeled, those on the sides raised, subtrigonal, almost spinose, truncate behind; the whorls alternately longer and shorter, and the scales of the two median dorsal series of every other whorl much wider than the others; 28 scales in the fourth whorl.

The black spots form two irregular series along the middle of the back; a dorso-lateral series of white black-edged ocelli; a large ocellus above the shoulder; black dots on the head; the labials black-edged; lower parts uniform white.

3. *Gravid female*\*.—Head very small and even rather more depressed than in specimen No. 1, its greatest depth hardly equalling the distance between the eye and the tympanum; snout acutely pointed. Rostral not entering the nostril and separated from the frontonasal by the nasals, which form a rather long median suture; frontal as long as its distance from the end of the snout; a complete series of granules between the two principal supraoculars and the supraciliaries; parietals once and half as long as broad, in contact with the upper postocular, the outer border nearly straight; three small occipitals in a transverse line; temporal scales small and granular; tympanic and masseteric shields well

\* Boettger was therefore not justified in saying (Ber. Senck. Ges. 1889, p. 205) of *L. depressa*: "Sowohl De Filippi, als auch Canerano, v. Bedriaga und Boulenger kannten nur die mehr graugrün oder olivengrau gefärbte Jugendform derselben."

developed, the latter oval, oblique, and separated from the upper temporal shield by one series of granules; four upper labials anterior to the subocular, the lower border of which is nearly as long as the upper.

Collar even-edged, composed of 10 plates; 31 scales between the chin-shields and the collar.

Body much depressed. Dorsal scales round and flat, perfectly smooth, 54 across the middle of the body, 3 or 4 corresponding to a ventral plate, 31 to the length of the head. Ventral plates in 6 longitudinal and 29 transverse series. Anal plate preceded by a large but narrower plate and bordered on one side by two small plates, on the other by three.

Hind limb reaching the wrist of the adpressed fore limb; scales on the upper surface of the tibia round, feebly keeled, considerably smaller than the dorsals, 14 of the former corresponding to 10 of the latter. Femoral pores 17-18. 28 scales under the fourth toe.

Caudal scales as in specimen No. 2, but the keels somewhat less developed.

Uniform greyish above, with mere traces of dark spots and ocelli on the sides (bleached?); labials not dark-edged; lower parts white.

4. *Female*.—Head as in a typical *L. muralis*, its depth equal to the distance between the centre of the eye and the tympanum; snout obtusely pointed. Rostral not entering the nostril and separated from the frontonasal by the nasals, which form a rather long median suture; frontal as long as its distance from the end of the snout; a complete series of granules between the two principal supraoculars and the supraoculars; parietals once and a half as long as broad, not in contact with the upper postocular, the outer border very slightly concave for the accommodation of the large upper temporal; occipital not quite half the length of the interparietal but a little broader; temporal scales small and granular; tympanic shield well developed; masseteric shield very small, separated from the upper temporal by two or three series of granules; four upper labials anterior to the subocular, which is considerably narrower beneath than above.

Collar even-edged, formed of 10 plates; 25 scales between the chin-shields and the collar.

Body moderately depressed. Dorsal scales round, flat, perfectly smooth, 48 across the middle of the body, 3 corresponding to a ventral plate, 35 to the length of the head. Ventral plates in 6 longitudinal and 28 transverse series. Anal plate bordered by a semicircle of 4 rather large plates.

Hind limb reaching elbow of adpressed fore limb. Scales on upper surface of tibia round, smooth, smaller than the dorsals, 12 of the former corresponding to 10 of the latter. Femoral pores 16-16. 26 scales under the fourth toe.

Caudal scales moderately keeled, as in a typical *L. muralis*; 32 scales in the fourth<sup>th</sup> whorl.

Black dots irregularly disposed on the middle of the back; a dark lateral streak, formed of confluent vermicular spots, enclosing light ocelli above the shoulder; upper surface of head without spots; labials not dark-edged; lower parts white.

5. *Male*\*.—Shape of head and head-shields as in specimen No. 1, but nasals forming a short suture behind the rostral, fourth supraocular undivided, and lower border of subocular distinctly shorter than upper.

Collar even-edged, composed of 8 plates; 32 scales between the chin-shields and the collar; gular fold very indistinct †.

Body much depressed. Dorsal scales roundish-hexagonal, flat, smooth, very faintly keeled on posterior part of back; 61 scales across the middle of the body, 3 or 4 corresponding to a ventral plate, 42 to the length of the head. Ventral plates in 6 longitudinal and 25 transverse series. Anal bordered by a semicircle of 8 small shields, the right median of which is twice as large as the left.

Hind limb reaching the shoulder. Scales on upper surface of tibia rhomboidal, keeled, and a little larger than the dorsals, 8 transverse series of the former corresponding to 10 of the latter. Femoral pores 18–18. 26 scales under the fourth toe.

Caudal scales as in No. 1, but the whorls more distinctly unequal in length, alternately longer and shorter; 26 scales in the fourth whorl.

The specimen is much bleached; in what remains of the markings it agrees with No. 1.

The following measurements are taken from the five specimens, in all of which the tail is either reproduced or partly broken off:—

|                          | 1.  | 2.  | 3.  | 4.  | 5.  |
|--------------------------|-----|-----|-----|-----|-----|
|                          | mm. | mm. | mm. | mm. | mm. |
| From snout to vent ..... | 68  | 60  | 53  | 53  | 52  |
| "    "    fore limb ...  | 28  | 23  | 18  | 19  | 21  |
| Length of head .....     | 17  | 15  | 11  | 12  | 13  |
| Width of head .....      | 11  | 9   | 7   | 7½  | 8   |
| Depth of head .....      | 6   | 6   | 4   | 5½  | 5   |
| Fore limb .....          | 23  | 20  | 16  | 16  | 19  |
| Hind limb .....          | 40  | 32  | 24  | 24  | 28  |
| Foot .....               | 20  | 17  | 14  | 14  | 16  |

The first and largest specimen, the male of which measurements have been given by Camerano ‡, having smaller dorsal scales (60 in a transverse series), less spinose caudal scales, and 22–21 femoral pores, clearly represents Bedriaga's var. *modesta* §, and is identical with the smaller male specimen referred to as

\* The specimen preserved in the British Museum.

† Quite distinct in the other specimens.

‡ The female specimen of which comparative measurements have been given is evidently the one which has passed into Dr. de Bedriaga's private collection.

§ Bedriaga divided the species into two varieties: *modesta* and *rudis*. The name *modesta* had been previously proposed for a variety of *L. muralis* by Eimer.

*L. depressa* in the British Museum Catalogue of Lizards\*. Should Camerano's species be broken up into several forms, this specimen must be regarded as the restricted type of *L. depressa*. It is probably from Trebizond, since Boettger's specimens from that locality agree closely with it †; but it must be noted that specimens from Shusha, E. Karabagh, received from the Senckenberg Museum as *L. muralis*, var. *defilippii* Boettger ‡, belong, in my opinion, to the same variety. Méhely's var. *depressa* from Shion in Transcaucasia § is also probably the same thing.

The second specimen, with larger dorsal scales (51 across the body), with larger and more strongly keeled scales on the tibia, with more strongly raised keels on the caudal scales, and with 18 femoral pores, has been specially selected by Bedriaga as the type of var. *rudis*. But it is remarkable that no allusion should have been made to its having five anterior labials instead of four, the number unreservedly given in the diagnosis of *L. depressa*. The specimen from Batoum noticed by Boettger ¶ is probably correctly referred to this form; it has 5 anterior labials on one side, 4 on the other, and 46 scales across the body.

The third specimen answers in all important respects to the figure of *L. portschinskii* of Kessler ¶¶, from Tiflis, the Russian description of which was translated in 1879 by Bedriaga\*\*. Bedriaga then identified *L. portschinskii* with *L. depressa*; he afterwards in his monograph published in 1885, most emphatically repudiated this identification and placed *L. portschinskii* simply in the synonymy of his *L. muralis fusca*, whilst regarding *L. depressa* as a distinct species having much less in common with *L. muralis* than with *L. oxycephala* ††.

The fourth specimen agrees entirely with the Persian lizards described by De Filippi and by Blanford, and may be referred to the var. *defilippii* Camerano, of which var. *persica* Bedriaga, is a synonym.

The fifth specimen, as stated above, should be referred to the var. *depressa, sensu stricto*.

Comparing the *L. depressa* of Werner with these specimens, I find it does not agree with any of them, differing in the shorter limbs, a character emphasised by Werner in his description. But it agrees with specimens from Lake Gokcha which, in my opinion, represent the *L. chalybdea* of Eichwald (*L. muralis*, var. *saxicola* Bedriaga). In the following table I give the measure-

\* Vol. iii p. 34 (1887).

† Ber. Senck. Ges. 1892, p. 141. 58-60 scales across body, 30-32 gular scales, 8 tibial scales corresponding to 9 or 10 dorsals.

‡ *L. c.* p. 144. These Shusha specimens are regarded by Boettger as connecting the var. *defilippii* Camer. with the var. *raddii* Boettg.

§ Dritte Asiat. Forschungs. Graf. E. Zichy, ii. Zool. p. 54 (1901).

¶ Ber. Senck. Ges. 1889, p. 204.

¶¶ Tr. St. Petersburg. Soc. Nat. viii. 1878, p. 160, pl. i.

\*\* Arch. f. Nat. 1879, p. 308.

†† The British Museum possesses a quite similar specimen from Elizabethpol, among several received from the St. Petersburg Museum, the largest of which agrees with Eversmann's figure of *L. saxicola*.